

1143-05-216

Dieter Mitsche, Mike Molloy and Pawel Pralat* (pralat@ryerson.ca), Department of Mathematics, Ryerson University, 350 Victoria St., Toronto, ON M5B 2K3, Canada. *k-regular subgraphs near the k-core threshold of a random graph.*

We prove that the binomial random graph $G_{n,p=c/n}$ with high probability has a k -regular subgraph if c is at least $e^{-\Theta(k)}$ above the threshold for the appearance of a subgraph with minimum degree at least k ; i.e. an non-empty k -core. In particular, this pins down the threshold for the appearance of a k -regular subgraph to a window of size $e^{-\Theta(k)}$. (Joint work with Dieter Mitsche and Mike Molloy.) (Received August 14, 2018)